ORIGINS

• Journal of the Biblical Creation Society •

Volume 2 Number 4

in this issue:

The Implications of Creation

Maybe Eve Really Did Exist!

The Dignity of Man in Creation

ORIGINS
• Journal of the Biblical Creation Society •

Vol 2 No 4
April 1988

Contents

		Page
Editorial	Michael Matthews	2
Implications of the Doctrine of Creation	Geoffrey Thomas	3
Creation in The News		4
Maybe Eve Really Did Exist!	Nancy Darrall	5
The Dignity of Man in Creation	Robin Dowling	8
The Other Big Bang	Andrew Loose	12
News of Creation		13
Reports: BCS at the Bible Weeks		13
BCS Regional Conference Chingford	Charles Whitworth	13
Creation-Evolution Seminar at Bolton	Michael Matthews	14
BCS Publications		14
Reviews: Two Men Called Adam	Paul Taylor	15
Crossroads Creation Series	David Tyler	16
The Great Evolution Mystery	David Tyler	16
The Young Scientist Book of Evolution	Sylvia Baker	18
Correspondence		18

Editorial Committee

General Editor Michael G. Matthews BArch MSc RIBA Architect & Systems Manager in Chester
Technical Editor David C. Watts PhD BSc CPhys MInstP CChem FRSC Senior Lecturer in Biomaterials Science, University of Manchester
Review Editor Nancy M. Darrall PhD Research Officer with the CEGB
The Rev. Nigel M. de S. Cameron MA BD PhD Warden of Rutherford House Edinburgh
J.H. John Peet PhD CChem FRSC Science Co-ordinator at Guildford County College of Technology
David J. Tyler MSc MInstP CPhys ACFI Senior Lecturer at Manchester Polytechnic

Contributors

Sylvia Baker MSc is the author of the best-selling *Bone of Contention*
Robin Dowling BSc is pastor of Salem Baptist Church, Kew
Andrew Loose BSc(Hons) MSc teaches mathematics in a comprehensive school, having obtained degrees in astronomy
Paul Taylor BSc is a science teacher in a comprehensive school
Geoffrey Thomas BA BD is pastor of Alfred Place Baptist Church, Aberystwyth
Charles Whitworth MA(Econ) DipTh is a freelance economist working on overseas development projects

Writing for Origins

Origins is looking for talented new writers, particularly those who have expertise in a specialized field of science or theology, in relation to creation, and who are in sympathy with the aims and basis of the BCS. In addition writers in a popular vein are needed, but accuracy and solid content are still essential. Any manuscripts for consideration should ideally be typed, double-spaced and sent to the Editor. News items that may be of interest are also sought. We are now also able to receive manuscripts submitted on disk, Amstrad 3" format; disks would be returned after transfer of the file.

Editorial Policy

Whilst **Origins** exists to further the aims of the Biblical Creation Society, opinions expressed in articles and signed editorials are not necessarily shared by either the Editorial Committee or the Society.

Credits

Design, illustration and artwork by Steve Carroll, Reading.

ORIGINS 2:4
• Journal of the Biblical Creation Society •

Editorial

I am not aware that Adolf Hitler used the words 'superior genes' to describe his ideal Aryan race, but the idea was the same as that of the conservative party in South Africa who described themselves in such terms. Hitler's ideas were derived to some extent from those of Nietzsche, the German philosopher of the last century, with his concept of 'Superman' – yes, the idea is older than the 20th Century – which was an unashamed product of evolutionary ideas. The evolutionary background has not been specifically mentioned in the case of South Africa, but the concept of some genes being inherently superior to others springs from evolutionary ideas of 'upward progression'. It matters not that many scientists will protest that this is a perversion of the evolutionary theories that they propound; the popular mind has this vision of 'the ever-upward path' firmly fixed.

It is *only* when we grasp the truths concerning man's true nature that we shall have a proper perspective on such evils. It is the lack of such a Biblical basis that causes so many Christians to sit on the fence.

All this is in total contrast to the Biblical teaching concerning the essential worth and dignity of every human being, each one made in the image of God, and our essential unity in Adam; including our equal status as sinners in the sight of God. The main article in this issue seeks to expound the meaning of man's dignity in his nature as image-bearer of his creator. The issue is thrown into prominence also by the present stormy passage through Parliament of David Alton's Bill to reduce the slaughter of abortion; it is *only* when we grasp the truths concerning man's true nature that we shall have a proper perspective on such evils. It is the lack of such a Biblical basis that causes so many Christians to sit on the fence in this matter. It is but a short step from abortion to the eugenics of the parties in South Africa referred to above.

The true nature of man is explored in other articles in this edition; Nancy Darrall takes a critical look at recent research on his genetic ancestry, and the relationship of Adam to Christ – and hence the eternal destiny of all men – is the subject of one of the books reviewed. In many ways this is the 'cut-off point' for creation; whatever else we may believe, the concept of man as a unique creature, made in the image of God, and responsible to him, cannot be reconciled with evolution, at this point; and once we have conceded this much, we have to come face to face with all that our creator says about our state. Geoff Thomas goes on from there and explores some of the positive outworkings of the doctrine of creation, in our thought-provoking leading article.

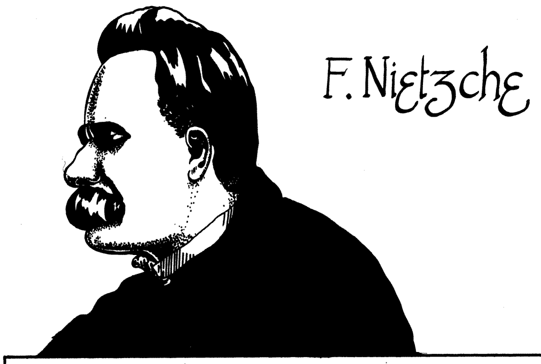
Forthcoming Features

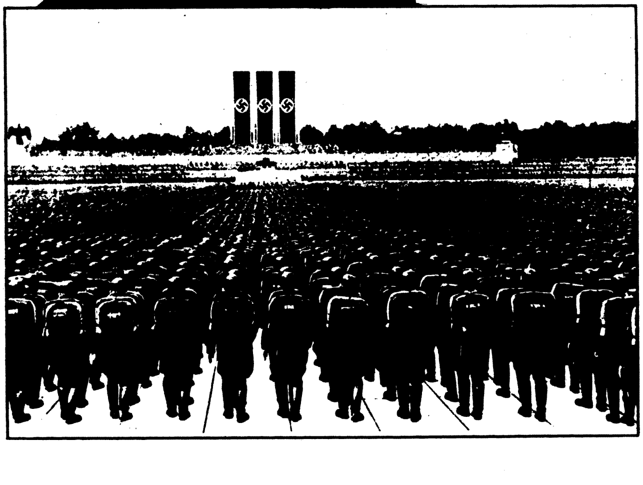
In the next edition we are hoping to publish the initial draft of what has been dubbed our 'Creation Manifesto', which is an attempt to lay out the common ground, the 'sine qua non', for all those who believe in biblical creation, and at the same time therefore to set an agenda for discussion in those areas where disagreement exists. In the following edition the vexed issue of the age of the earth will be looked at from a variety of different standpoints, this being one of those controverted areas.

Beware of Imitations!

We are now convinced of a multiplicity of Origins; in other words, there are now a number of journals using the title, not to mention radio and television programmes. There are only two journals published in this country, however, with the title; our namesake, which preceded us, is concerned with the almost unrelated subject of tracing family trees, but there are a number from the USA that deal with the same issues as the BCS. One is published by the Geoscience Research Institute, located at Loma Linda University, California, and is especially dedicated to a broad multidisciplinary approach to the questions of beginnings. It does not overtly promote creation, but at least some of the editorial board believe in the biblical account; it is commended as a thoughtful and sober scientific discussion of a broad range of issues.

Another colourful magazine of the same name has recently made its appearance on our streets, however. Beautifully produced and illustrated, at a glance it may appear to be another edition of this journal; it is in fact published by the Bhaktivedanta Institute, 'a centre dedicated to the ... study of the nature and origin of life ... in the light of ancient India's Vedic literature'. No attempt is made to conceal this or pass for something else, but we need be aware of this to avoid confusion. This other magazine is a graphic(!) illustration of the point made in the main article in Origins 1:3 that creationists can be adherents of non-Christian faiths, and that we err if we do not remember to accord the Lord Jesus Christ his rightful and exclusive place at the origin of all things.





Implications of the Doctrine of Creation

Geoffrey Thomas

"What is the work of creation ?"

"The work of creation is, God's making all things of nothing, by the word of His power, in the space of six days, and all very good." (Westminster Shorter Catechism, Question 9)

The understanding of the world that our Saviour's teaching on creation provides for us has the most profound consequences, affecting our attitude towards a whole range of things.

1. Our View of our Own Lives

We look back to a point when the world actually began. In other words, there have not always been cycles of movement; there was a beginning, so that history since that time has been linear. My own history had a conception: I was not eternally a part of 'the ground of being', (whatever that means). The world began; history began; our individual lives began. And what is more there will be an ending which will be accomplished by the same divine power that began all things. For men that eventuality will be death, and that will not be a process but punctiliar: (i.e. a full stop, an instantaneous event). 'It is appointed unto men once to die,' (Hebrews 9:27) as once it was appointed unto them to live. Let us always remind ourselves that it is but one life we have.

All this is crucial because it delivers mankind from fatalism. We are not caught up in some cycle to which we must resign ourselves passively. We can change our lives: we can change the world: we must change it. Our message to men and women is that they need not go on in life as they are, but that they can transcend their environment, background, genes and even their personality by that same power that made them and all things. Life need not go on with perhaps a hideous inevitability as it has thus far. God can make me a new creation: so 'You must be born again.'

2. Our View of the World

God made everything, and so the dust of the earth is ethically good. The Creator saw what had been made and He liked it. It comes from His mind so that matter has a benign predictability and orderliness; the God who made it did so by design. This also means that matter is rational: and as we are made in the image of the Creator we can understand His handiwork. We have a mandate from Him to get to grips with His world replenishing and subduing it.

We also see that the creation is interdependent. Nothing seems to be of any significance except as part of something greater: the electron is part of the atom: the atom is part of the molecule: the earth is part of the solar system: the sun is part of a cluster: the cluster is part of a galaxy. There is nothing that can claim, "My significance is in myself alone." Nothing has meaning except as part of the universal totality of creation. All things are inter-reliant and are subordinate to the whole.

Christianity has taught this for 2,000 years and it has been an enormously vital conviction which has in effect transformed the world. It has given birth to western science, to universities and hospitals, because views such as the following are essential for the development of systematic knowledge:

a) Matter is good and worth studying carefully.

b) Creation is orderly and rational so that what is true today will be true tomorrow.

There are no "black holes" or "no go" areas for even the evangelical research student.

c) Discovery is possible: we can subdue the world: it is open to the human mind. It is contingent and dependent so that we can progress.

d) We must share freely what we know we have gained. Once we have discovered something then all the world must know. Disease must be fought: food production must be improved. We are under constraint to help our fellow man.

These things have been of profound consequence for the whole development of civilization. When a community holds to this, i.e. a coherent set of beliefs shared by everyone, especially those in leadership, then that community becomes committed to education in every single discipline within this framework, there are no 'black holes' or 'no go' areas for even the evangelical research student.

3. Our Self-conscious Stewardship

We are ecologically aware. We hate to see the pollution of this lovely creation. We want to see it elevated to its fullest potential, and so as a man loves his own wife we nourish and cherish this gift that God has given us. The world is the theatre of God's glory, in which He has tabernacled. We can even appreciate the lament of The Doors in their Sixties' song called "Strange Days":

What have they done to the earth ?
What have they done to our fair sister ?
Ravaged and plundered,
And ripped her and bit her,
Stuck her with knives in the side of the dawn,
And tied her with fences and dragged her down.

4. Our Fear of Idolizing God's Creation

It is a creation of God, not a part of Him. It groans and labours under the curse and no paradise will ever be built here by man. So we do not over-value it. Evangelical theology is the queen of the sciences, we believe, not humanistic ecology. Our ultimate loyalty is reserved for God Himself, and there is nothing in the world that can satisfy us by itself. To the out-doors man, and the hill walker, and the naturalist we dare to say that that lifestyle in itself cannot and must not satisfy. To Attenborough and Bellamy and the whole scientific community we affirm, "Men's hearts are restless until they rest in Christ the Creator." And when we lose our capacity to appreciate life and our senses fail we whisper that God Himself is our goal. To the ecologist our message is, "Yes, with some of your convictions we agree, but keep yourself from idols."

5. Our View of Morality

The Creator of all things has the right to speak to His creatures, whom He is supporting moment by moment, and He can tell us how we are to live. The God of Genesis One is the God of Exodus Twenty, and there we find the Ten Commandments which He has wisely and lovingly given. These are the notes of the tune that would have made the world sing in perfect harmony. But men have written their own songs, hence the cacophony.

What we now witness is men subduing the earth, making great progress in technology and medicine and weaponry but ignoring their Maker. They are like squatters who have moved into the owner's house during his vacation abroad and who are turning the home into a house of violence, sensuality and pain. Yet God is speaking to men's consciences continually telling them of their obligations, reminding them that they must answer to Him. How pathetic to see a little boy inviting an acquaintance into his home and telling him that this is his property which belongs to him as the sole occupant, while all around them are the signs of his father's existence virtually crying out to the visitor. It is the fool that says in his heart that there is no God.

Yet to such people God has come, dwelling alongside us in this darkness where men crucify other men, displaying His love by taking the guilt of our sins on the cross. There 'God the mighty maker died for man the creature's sins.' He still speaks and says, "Remember your Creator. My son give me your heart."

Creation in the News

The subject of the origin of man seems never to be off the air, and the BBC have just transmitted yet another series called 'And Then There Was Us', on Radio 3. This series dealt specifically with theories about the beginnings of modern man, Homo Sapiens Sapiens, and the disappearance of other groups (there was disagreement about whether it should be other species) such as Neanderthal Man. Nancy Darrall's article in this issue comments critically on the research which was discussed in the first programme, 'Delving for Eve'. The presenter Colin Tudge stated at the beginning that 'there is a lot to explain . . . where did we come from?', and went on to outline the two conflicting theories current at present. One of these is known as 'the Noah's Ark hypothesis' (!), which traces all modern humans to one small stock in Africa a comparitively short time ago, which constituted a genetic bottleneck. It was fascinating to see how two groups of experts could fundamentally disagree given the same evidence; though this phenomenon is not unknown amongst Biblical Creationists either! In the second programme we heard how the stereotyped picture that we have of Neanderthal Man may not in fact be correct; he could have been light-skinned, fair-haired and blue-eyed! Other fascinating items were mentioned such as the fact that they used stone tools with fossils in, and they do not appear to have built cities; no conclusions are drawn from these!

Haven't we met somewhere before?

An item in New Scientist (15th October 1987), p.33, asks "How could a mollusc which lived all its adult life cemented fast to the seabed in shallow water occur thousands of kilometres apart in the Arabian Gulf and the Caribbean?" In an article on 'Palaeontology', which describes the finding of almost identical forms in the two locations, two scientists suggest that the creatures were swept along by ocean currents, using temporary volcanic islands, although there is at present no evidence for this. They state that there is no evidence for the two seas ever being closely together, and they rule out the possibility that it evolved twice in different locations. Certainly that is one explanation!

Maybe Eve Really Did Exist!

Nancy Darrall

The idea of an original human couple, Adam and Eve, is something dismissed as a fairy tale by those who have accepted the ideas of evolutionary scientists. Man, it is generally believed, evolved gradually from apes. However, recently a group of scientists working at the University of California, Berkeley, have suggested that it is possible to trace back the family tree of the whole human race to one original woman who lived in Africa about 200,000 years ago (Cann et al,1987). A number of articles have appeared in the scientific press and also in the more popular media presentations on this subject, including a Horizon programme in 1987. These suggestions have been met with considerable opposition in parts of the scientific community (Wainscoat et al,1987).

Is this material for the Creationist cause, or are there more questions raised than are answered, as the place of origin is thought to be Africa, and the time 200,000 years ago?

Introduction

First, we need to look at the scientific facts behind these ideas which have generated so much interest. Most of the information that determines the design and appearance of living creatures is coded for in the DNA contained in the nucleus of each plant or animal cell. However, DNA is also found in other parts of the cell, including the mitochondria, subcellular structures involved in the release of packets of energy (ATP) from glucose for use throughout the cell. The DNA in the mitochondria is found in a single loop and it is more readily damaged than the DNA in the nucleus. These sites of damage (mutations) have been used as markers in the study of human populations because of their more frequent occurrence. The changes are handed down and others are added during the passage of generations. However, unlike those genes which make up the hereditary material of the nucleus, where mother and father contribute about equal proportions to their offspring, the mitochondrial DNA is donated entirely by the mother. These features mean that mitochondrial DNA provides a valuable opportunity to trace the ancestry of the human gene pool, how it arose and when it was dispersed.

What did the Scientists Find?

The group of scientists working on this subject at Berkeley looked at the mitochondrial DNA of 147 people from various continents, 20 Black Americans, 2 Aboriginal !Kung from southern Africa, 21 Australian Aborigines, 26 New Guineans, 34 Asians from China, Vietnam, Laos, the Philipines, Indonesia and Tonga and 48 Caucasians from Europe, North Africa and the Middle East. First, they broke up the large mitochondrial DNA molecule into small fragments using restriction enzymes which attack the molecule at specific sites. The fragments could then be identified and the existence of areas which had undergone a change could be easily recognised. Of the 147 different people sampled, 133 distinct types of mitochondrial DNA were identified, some occurring in more than one individual. The divergence of each type from every other could then be estimated; values ranged from 0-1.3%.

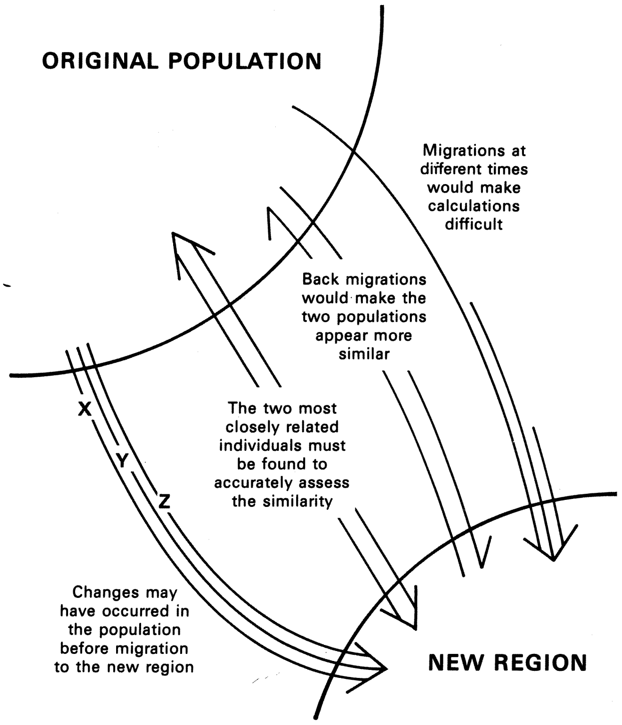

ORIGINAL POPULATION
Migrations at different times would make calculations difficult
Back migrations would make the two populations appear more similar
X
Y
Z
The two most closely related individuals must be found to accurately assess the similarity
Changes may have occurred in the population before migration to the new region
NEW REGION

Figure 1.
Diagrammatic explanation of the problems in estimating the similarity of two populations

How did they Interpret their Results ?

Information about the specific differences between the mitochondrial DNA of the people used in the study was fed into a computer programme which compared the extent and nature of these differences and then built up the most likely family tree.

One of the two primary branches of the family tree which they produced led exclusively to people of African origin, whilst the other led to both African and all other types included in the study. By suggesting that modern humans originated in Africa, the number of migrations between continents was minimised. Another reason why Africa was thought to be the place in which modern humans first appeared was that the mitochondrial DNA showed the most variation in this continent. As variation is the result of changes from the original type, it was therefore assumed that this line of the human species had been in existence for the longest time to have allowed the greatest number of changes to have occurred. However, not all scientists working in the field would agree with this interpretation. Some think that populations which are relatively isolated from others, as has been the case in Africa, would accumulate changes more rapidly (Barton and Jones,1983 and Jones and Rouhani,1986). This then could equally account for the greater variability found in individuals from Africa.

In comparing branches of the human family tree living in various parts of the world, there are a number of difficulties in assessing just how much change has occurred. The group of scientists at Berkeley have pointed out some of the problems when discussing their results from a study of Aboriginal Papua New Guineans (Stoneking, Bhatia and Wilson,1986). These are summarized in **Fig 1.**

As the circumstances of the migration and the times at which the changes in the mitochondrial DNA occurred are not known, the simplest case is adopted for the construction of the family tree. A number of assumptions are made in trying to trace the pathway of migration and the order in which the events occurred. First, a single migration to one area at a time should have occurred, rather than several groups leaving simultaneously. Second, only a single migration should have occurred to any one area. Third, no subsequent back-migrations should have occurred to supplement the original population. Fourth, the migrants should include representatives of only one type of mitochondrial DNA. Changes in the mitochondrial DNA of some individuals in the original population would lead to a variety of forms existing within this group. When part of the population subsequently migrated to a new region, the women who migrated may have represented more than one mitochondrial DNA type, and the same may have been true for those remaining. In a subsequent study of the two populations, it would not be possible to distinguish between changes prior to the original migration and back-migration of types originating in the new region, but the interpretation placed upon the data would affect the estimate of the time since the two populations became separated. Fifth, the evolutionary pathway should involve the least number of changes from the original ancestor, rather than the same change taking place in several individuals at different times. Sixth, the sample taken for analysis in the laboratory should be representative of the population and include the most closely related members, otherwise the two populations will appear less similar than they actually are. Although it is appropriate to start with the simplest model in the absence of any contrary information, it is likely in this case that it is not correct. For example, colonisation of the Highlands of Papua New Guinea is thought to have involved several separate migrations even to this small area (Cann et al, 1987). Interestingly, another group of scientists, using a similar set of results (Horai et al,1984) from a study of Japanese, Caucasians and Negroes came to the conclusion that the three major races each contained a variety of types before they separated and migration occurred; (i.e. assumption 4 incorrect). Amendment of the calculation to take into consideration the effect of one or more of the assumptions mentioned above being incorrect is likely to reduce the time span required for the variation in the mitochondrial DNA to have come into existence.

From the estimate of similarity, the time since the divergence of any two populations is calculated:

Time since separation = Amount of difference x Rate at which differences appear

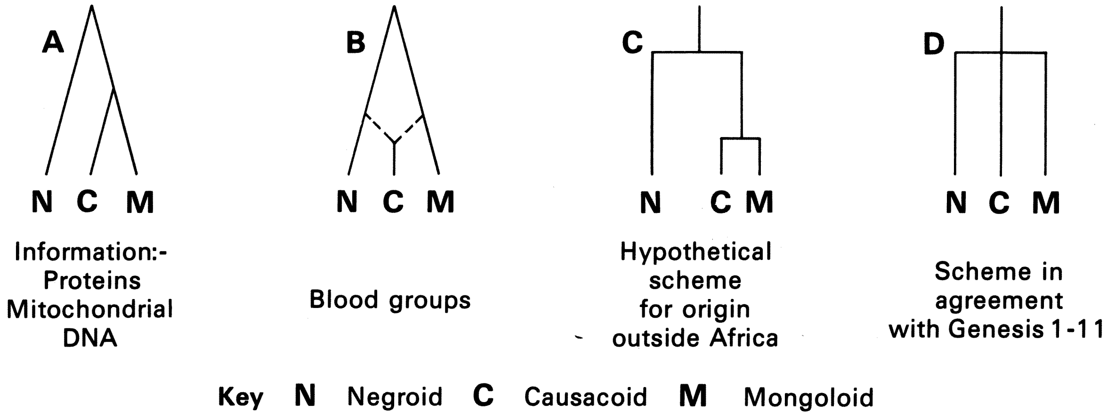
Only the amount of difference can be estimated by the comparison of different mitochondrial DNA types. The rate of change in mitochondrial DNA molecules has then been calculated as 0.5-1.0% per line per million years (Brown et al,1980) and 2-4% per line per million years (Wilson, 1985). Estimates are based on the assumption that all parts of the mitochondrial loop are equally likely to be damaged, a point that is disputed by some (Greenberg, Newbold and Sugino,1983). The time of colonisation of a particular area is taken from archaeological information, e.g. 50,000 years since man first left Africa (Brauer,1984). However, such information is scant and the timing based on dating methods which cannot be accurately checked using known standards beyond about 5,000 years ago (Libby,1960).

What can we Learn from the Study?

It is all too easy to criticise the interpretation scientists place on their results because of the assumptions made, but at the same time, it is important to understand what these assumptions are and the group of scientists at Berkeley have been careful to point these out in their more detailed publications. The fact that these assumptions can considerably alter the interpretation of the data is not always made clear in the reporting of such findings in the mass media. In this case, the amount of difference between the various types of mitochondrial DNA are the results reported in the scientific papers, the interpretation of that information leads to estimates of the rate of change of the mitochondrial DNA, the time at which the various populations migrated and the site of origin of that first human population. It is possible to conclude from the results of the mitochondrial DNA studies that all humans are closely related and may have descended from one original woman. Equally valid interpretations are that there may have been many women originally, all with identical forms of mitochondrial DNA. Alternatively, there may have been many different types of mitochondrial DNA originally, but only that from one woman can be traced down to the present populations of the world, the others led to family lines with no female offspring. This could have occurred by a process known as random genetic drift which involves the chance extinction of some family lines (Wainscoat,1987). However, the likelihood of extinctions in an expanding population is thought to be low (Cann et al,1987).

It is the opinion of many scientists in the field that mitochondrial DNA is surprisingly similar considering the length of time since man (Homo sapiens) first evolved. One possible explanation is that there was a bottleneck in the expansion of the human population and for a time only a few individuals survived and reproduced. This idea has been supported by Jones and Rouhari (1986) to account for the similarity in other biochemical characteristics between races in Europe and Asia compared with those in Africa. It is interesting that a bottleneck in the expansion of the human population occurred at the time of Noah (Genesis 7) when, at the most, only four types of mitochondrial DNA existed which could be passed on to future generations. These types were present in the women who survived the universal flood in the ark. The scientific results, rather than contradicting the Genesis account, are in agreement, although other explanations are possible.

It is interesting to compare the human family trees constructed from a variety of sources of biochemical information. A number of different possibilities are shown in **Fig 2.** Information from mitochondrial DNA leads to a different family tree (A) than information from blood groups (B) and it is not yet known how to resolve this discrepancy. Further possibilities are shown as (C) and (D), the final family tree is in agreement with the account in Genesis 1-11. The important events in this account are



Information:-
Proteins
Mitochondrial
DNA

Blood groups

Hypothetical
scheme
for origin
outside Africa

Scheme in
agreement
with Genesis 1-11

Figure 2. Evolutionary schemes for the three main racial groups (information from Cann et al, 1987 and Nei and Roychoudury,1974)

the existence of Adam and Eve, the small number of females surviving the bottleneck in population expansion which occurred at the flood in the time of Noah and the multiple migrations within a short space of time following the building of the tower of Babel.

What Conclusions can we Draw?

1) The scientific findings do not contradict the Genesis account.

2) One of a number of interpretations of the findings is that there was one original woman, this is in agreement with the Genesis account.

3) The existence of a bottleneck in the expansion of the human population has been suggested to account for a number of features in the similarity and divergence between races. This interpretation of the results is in agreement with the Genesis account of the almost total destruction of the human species in a worldwide flood at the time of Noah.

4) An African origin for man has not been proved by the scientific findings from mitochondrial DNA. It is based upon an interpretation of the variation found in the mitochondrial DNA of people from this region. This interpretation is not accepted by all scientists in the field.

5) The findings of the scientific group at Berkeley do not provide any more accurate dates for the origin of man or the date of the first colonisation of a particular region. Their figures, 200,000 years since the appearance of modern man are based upon archaeological estimates already published. Problems with the accuracy of these dating methods have been discussed at length elsewhere (eg White,1978).

6) The scientific information on the amount of difference between the mitochondrial DNA of various individuals has been used to model the time of separation of various populations. A number of assumptions have been made. If found to be incorrect reassessment of the results would reduce the length of time required.

7) The model used to analyse the results assumes that only one migration at a time occurred from the original population. This is the simplest model and therefore the most appropriate first choice. However, it is not in agreement with the Genesis account in which multiple migrations occurred within a short space of time following the building of the tower of Babel (Genesis 11).

8) We await further developments in this field with interest.

References

Barton, N. and Jones, J.S. (1983) Mitochondrial DNA: new clues about evolution. Nature, 306, 317-318

Brauer, G. (1984) in 'Origins of Modern Humans: A World Survey of the Fossil Evidence.' (ed. F.H. Smith and F. Spencer) 327-410

Brown, W.M., George, M. Jn. and Wilson, A.C. (1979) Rapid evolution of animal mitochondrial DNA. Proc. Natl. Acad. Sci. USA, 76, 1967-1971

Cann, R.L., Stoneking, M. and Wilson, A.C. (1987) Mitochondrial DNA and human evolution. Nature, 325, 31-37

Greenberg, B.D., Newbold, J.E. and Sugino, A. (1983) Intraspecific nucleotide sequence variability surrounding the origin of replication in human mitochondrial DNA. Gene, 21, 33-49

Horai, S., Gojobori, T. and Matsunaga, E. (1986) Distinct clustering of mitochondrial DNA types among Japanese, Caucasians and Negroes. Japanese Journal of Genetics, 61, 271-275

Jones, J.S. and Rouhani, S. (1986) How small was the bottleneck? Nature, 319, 449-450

Libby, W.F. (1960) in Nobel Lectures 1942-1962, Elsevier, Amsterdam

Nei, M. and Roychoudhury, A.K. (1974) Genic variation within and between major races of man, Causacoid, Negroids and Mongoloids. Am. J. Hum. Genet., 26, 421-443

Stoneking, M. Bhatia, K. and Wilson, A.C. (1986) Rate of sequence divergence estimated from restriction maps of mitochondrial DNAs from Papua New Guinea. Cold Spring Harbor Symposium on Quantitative Biology, 51, 433-439

Wainscoat, J. (1987) Out of the garden of Eden. Nature, 325, 13

White, A.J.M. (1978) What About Origins? Dunestone Printers

Wilson, A.C. (1985) Mitochondrial DNA and two perspectives on evolutionary genetics. Biol. J. Linn. Soc., 26, 375

The Dignity of Man in Creation

Robin Dowling

[This is an edited version of the first part of an article which appeared in 'Still Reforming', the theological bulletin of the Grace Baptist Study Centre, in December 1986, which in turn was originally given as a paper at the Grace Baptist Assembly in May 1986, and appears by kind permission.]

> 'The world has largely lost respect for human life from the moment of conception. The world is weak in upholding the indissoluble unity of marriage, it fails to support the stability and holiness of family life. There is a crisis of truth and responsibility in human relationships.'

We would all, surely, have to agree with the thrust of these words of John Paul II.[1] It is the prevailing evaluation of man in a society which largely determines the current social attitudes and behaviour. It is at this point we see the bankruptcy of secular humanism.

Julian Huxley wrote:

> 'Thus the development of man's vast potential of realizable possibility provides the prime motive for collective action'.[2]

In other words, it is the unimpeded progress of evolution which is the chief concern. This devalues the worth of those who might hinder the evolutionary progress, such as 'the senile, the imbecile, the hardened criminal, the psychopath, the chronically sick, or the starving'.[3] Compulsory euthanasia might suggest itself and, if humanists shrink back from this deduction, we thank God for their inconsistency but still see disturbing tendencies which lead in that general direction.

The Bible teaches that the dignity of man consists in that he was created in the image of God. It is precisely in its emphasis of humanness at the expense of godliness that humanism has undermined human worth. For it is precisely to the degree a person is truly godly, to that degree he will be fully human.

The Genesis account of Noah states (in Genesis 9:6) :

> **'Whoever sheds the blood of man, by man shall his blood be shed; for in the image of God has God made man.'**

This not only makes clear that man as fallen is still God's image-bearer but that the creation of man in God's image has clear implications in the realm of social ethics. It is hoped that some of these will be seen in the course of this article.

It is tempting to isolate certain qualities or activities as being the meaning of the image of God in man. But we must seek to be controlled by the Bible's own perspective.

The Biblical Foundation

Though biblical references to man as made in God's image (Hebrew: tselem) are not numerous, their importance is unmistakable and the concept of the dignity of man as God's image-bearer pervades biblical thought. No doubt the most fundamental reference is found in Genesis 1:26,27:

> **'Then God said, 'Let us make man in our image, in our likeness, and let them rule over the fish of the sea and the birds of the air, over the livestock, over all the earth, and over all the creatures that move along the ground.' So God created man in his own image, in the image of God he created him; male and female he created them.'**

It is tempting to isolate certain qualities or activities as being the meaning of the image of God in man. But we must seek to be controlled by the Bible's own perspective. This leads firstly to a fundamental statement about the image of God in man and it will *then* be appropriate to seek to discern other aspects of image-bearing.

The Definition of Man

We ought to note that man is *defined* in terms of the image of God. D.J.A.Clines has argued that the words 'Let us make man in our image' may be translated 'Let us make man *as* our image'.[4] Whether this be so or not, it is clear that, over against the rest of the creation, man *alone* is described as made in God's image. It is *this* which distinguishes him from the rest of creation.

Man is distinct from God. He is part of his creation ex nihilo, (as far as the raw materials are concerned). The Genesis account links him with the animal creation by making him share the same creative day as 'livestock, creatures that move along the ground, and wild animals.' Then it differentiates man precisely in these terms: that he was created in God's image. The most natural way to understand Genesis 1 is that, as Alec Motyer has written:

> ' 'Image of God' is the chosen description, indeed definition, of the total being of man in its unity and diversity, inwardly, outwardly, in capacity, function and relationship.' [5]

It is helpful to realise that Israel lived in the midst of peoples who made images of their gods. These images were not thought to be those gods themselves. Rather an image was regarded as representing the power of a god.

The essential thing about an image was its possession of the divine fluid or spirit. It was that which related it to the deity whose image it was and made it an object of worship. The god became present among men through the image. Interestingly, Genesis 2:7 speaks of an inbreathing of God's breath, through which man became 'a living being' (nephesh). And Genesis 1 and 2 sees man as God's counterpart within his creation. Man *is* the image of God. When Jesus said to the Pharisees, 'Give to Caesar what is Caesar's' (Matthew 22:21), he was thinking of the coinage upon which was Caesar's portrait and inscription. When he added, 'and give to God what is God's', was he thinking of that on which was the divine portrait and inscription, i.e. their whole selves?

All this includes the idea of *relationship.* As one writer has put it:

> 'The image is not a question of a quality in people but of the fact that God has created people as his counterpart and that human beings can have a history with God. The image of God is only there in the relationship of God and the individual.'[6]

Man stands in relationship to God as reflecting his image. To be in the image of God is a matter of the relationship to himself which God confers on man as man. It is not his capacity to be spoken to. It is, as David Atkinson puts it,

> 'to be addressed as Thou by the Divine I'. [7]

The Body and the Image

The image of God in man embraces his *bodily existence.* The words 'image' and 'likeness' have a uniformly three dimensional meaning throughout the Old Testament. The image in the ancient world had spatial properties, possessed a shape and was capable of being measured. We must add to this the fact that the Hebrew mind did not separate the soul and the body as distinct entities as we may often have done. The outward is not the man, nor is the inward, but the outward and the inward in all their complexities blended into a single whole. So, concerning the words 'Let us make man in our image', Derek Kidner can write,

> 'Man and not some distillation from him, is an expression or transcription of the eternal incorporeal creator in terms of temporal, bodily, creaturely existence'. [8]

The implication of the Genesis account of creation would seem to be that man as man has an outward form suitable to the invisible and spiritual nature of God. This is not to deny that God is anything other than spirit. It does not imply that outward form is part of his essence. Ezekiel is very careful at this point. When he sees a vision of the heavenly throne, he redoubles his caution when speaking of its occupant. He is cautious about the throne. For he describes it – in Ezekiel 1:26 – as

> **'what looked like a throne of sapphire'.**

But of the one on the throne he must say (to translate literally),

> **'the likeness of the appearance of a man'.**

He also speaks, in verse 28, of

> **'the appearance of the likeness of the glory of the Lord'.**

Again, Moses warns the people of God, in Deuteronomy 4:12,

> **'you . . . . saw no form'.** He adds in verses 15 & 16,
>
> **'You saw no form of any kind the day the Lord spoke to you at Horeb . . . . so that you do not become corrupt and make for yourselves . . . . an image of any shape, whether formed like a man or a woman.'**

God as God is not to be pictured as having any shape, including that of a human being. However, this does not alter the fact that man, in his bodily existence, is God's representative, his symbol within creation, with a physical form appropriate to the invisible and spiritual nature of God. There was, it could be added, an *appropriateness* about the Word becoming *flesh* (See Hebrews 2:17,18).

Conservative evangelicals have not always been strong in the realm of social ethics. But clearly our Christian living in this world should embrace real, tangible, bodily concerns. The idea of the body as the prison-home of the soul, or as essentially 'vile', has not helped to foster social conscience!

To make some limited application here which may in fact sound simplistic, the fact that the image of God in man, and thus man's dignity, embraces his bodily existence should 'earth' our ethical concerns. Conservative evangelicals have not always been strong in the realm of social ethics. But clearly our Christian living in this world should embrace real, tangible, bodily concerns. The idea of the body as the prison-home of the soul, or as essentially 'vile', has not helped to foster social conscience!

Ruler over Creation

When isolating other dimensions of the image of God in man we are really speaking of aspects of the expression of the divine image against the background that man in the totality of his being may be *defined* as the image of God. But, if there is a prime aspect it must surely be that, as God's representative, man is *the steward of his sovereign rule over earth.* Being created in God's image is closely associated with man's role in *rulership* over the rest of creation, and created beings.

When Genesis 1 records God as saying, 'Let us make man in our image, in our likeness', it virtually locates that image in man's dominion over creation by adding '*and let them rule over* the fish of the sea, etc.' Having reaffirmed the creation of man as God's image-bearer, it adds, in verse 28,

> **'God blessed them and said to them, 'Be fruitful and increase in number; fill the earth and subdue it. Rule over the fish of the sea and the birds of the air and over every living creature that moves on the ground.' '**

In ancient cultures such as those of Assyria and Egypt it was the *king* who was regarded as the image of God. In biblical thought every man is a king in this sense. Again, it has been noted that ancient kings sometimes put up statues of themselves in order to register a claim to rule the area in which the statue was placed. So, in a sense, man is 'God's statue'; the abiding evidence that God rules and also God's steward for the exercise of that rule. Psalm 8 takes up this theme and points up the dignity of man by saying:

> **'You made him ruler over the works of your hands;**
> **You put everything under his feet.'** [9]

It may be said in passing, again somewhat simplistically, that since the dignity of man is closely bound up with his dominion (under God) over the creation, to see people prisoners to drugs or drink, made from the very plants which God gave to man (Genesis 1:29) is ugly indeed. We cannot stand by and ignore these things.

Two Sexes – One Image

There is a *matrimonial* aspect to the expression of the image of God in man and indeed a *communal or corporate* dimension. Having doubly emphasised that man is created in the image of God, Genesis 1:27 adds, 'male and female he created them.' It is the male-female entity which is made in God's image. We have already seen that the totality of man is the image of God. But there is what Alec Motyer calls a 'super-totality' i.e., 'the man and the woman in the one-person unity of marriage.' [10] Significantly, when Genesis 5:2 speaks of the creation of 'male and female' it states:

> **'at the time they were created, he (God) blessed them and called *them* 'man' (or Adam).'**

But not only (or even mainly) does Genesis 1:27 point to the fact that marriage and sexuality are embraced in the image of God, but to the fact that the image of God is expressed by man in community. Man, as the image of God, was created male and female. Interpersonal relationship was built into his nature.

In Genesis 2:18 we read that,

> **'The Lord God said, 'It is *not good* for the man to be alone'.'**

In Genesis 1 the 'good' is what comes perfected from the hand of God – it is his judgement on his own work. In Genesis 3, 'good' is what is natural for unfallen man. But an isolated man without others of his own kind is 'not good' – a sort of blot on creation.

What Adam lacked therefore was not so much a wife so that he could procreate like all the animals, but another person so that he could become a human being

---

It is interesting to note the terms by which Eve is spoken of. She is to be 'a helper suitable (or corresponding) to him'. There is no inferiority implied in the term 'helper' – which is used elsewhere of God. But note that the woman is not primarily man's sexual partner, or the mother of his children, or his housekeeper. Rather, she is 'a helper' and, furthermore, one 'corresponding to him' or 'like him'. This is what he needed. What Adam lacked therefore was not so much a wife so that he could procreate like all the animals, but *another person* so that he could become a human being. [11] The image of God has a corporate dimension. It is expressed by man in community.

Interestingly, the first effect of the Fall, through which the image of God in man was marred (whatever that means precisely), was a spoiling of the relationship between Adam and his wife (Genesis 3:7). It was not long before 'Cain attacked his brother Abel and killed him' and with bloody hands exclaimed, 'Am I my brother's keeper?' (Genesis 4:8,9) Let us not be guilty of the same attitude, undermining God's image.

Our Spiritual Nature

The image of God in man is also expressed by *his spiritual and moral nature.* We may compare man and beast here.

Notice that in Genesis 1:22 God imposed a directive on the beasts:

> **'God blessed them and said, 'Be fruitful and increase in number'.'**

The case of mankind is different. We read in verse 28:

> **'God blessed them and *said to them,* 'Be fruitful and increase in number'.'**

Instead of an imposed directive we have personal address, as of one person to another. Man is not only made in God's image, as his representative, but in his likeness, as his representation. The possibility of a spiritual relationship is present.

Again, man's moral nature is implied in his being called to conform to the will of God in Genesis 2. It has been implied above that, in Genesis 1, 'the good' is that which meets with God's approval. In Genesis 2:17 the words 'good and evil' are addressed to him without any precise instruction as to what is good. All he is told is that he must conform to the will of God, the norm of goodness. And, just as in Genesis 2:18 God sets himself to eliminate a 'not-good', the law of the garden calls man to live in a yes-no relationship to the world by recognition of the good, which is to obey the will of God, and the not-good, which is to disobey it. This is a totally different life to the instinctive life of the beasts. [12]

So, when Paul considers the restoration of the image of God in man, in Christ, he can speak (in Colossians 3:10) of being 'renewed in knowledge in the image of (the) Creator' and (in Ephesians 4:24) of 'putting on the new man, created to be like God in true righteousness and holiness.'

Our Rational Nature

We should also briefly note that the image of God in man is reflected in *his rational character.* God, the supreme thinker, 'made the wild animals *according to their kinds'* (Genesis 1:25). In the great parade of animals (Genesis 2:19,20) man, in naming the animals (bearing in mind the full Hebrew connotations of the idea of 'name'), shows himself to possess the godlike capacity to discern like and unlike, to understand the qualities of things, to separate and classify according to true significance. It is evident that fallen man is still a thinker, in God's image. But his unaided thoughts about God are darkness and (Romans 1:23) man exchanges 'the glory of the immortal God for images made to look like mortal man and birds and animals and reptiles.'

Made to Work

Finally, man, as created in God's image, is a *worker.* This is implied in the command to 'fill the earth and subdue it'. God himself is presented in the creation narrative as a worker. Of course work itself has been corrupted by the fall (Genesis 3:19), and has become not only difficult but, for example, a tool of oppression. So, in the context of the dignity of man, we need to assert not only the sanctity of work, but the right of people to work and the importance of the pattern of work and rest established at creation (Genesis 2:1-3). We surely thank God for the overthrow of the proposed Sunday trading legislation two years ago with its potential for such things as the exploitation of shop workers. This potential was recognized by trades unions which, whilst not Christian, are made up of men in the image of God!

Conclusion

What shall we say in response to all this? Let us first refer to an implication of the fundamental point, that man as man is *defined* as the image of God. If it is being a member of the human species, rather than any quality or ability present in individual members of the species, that is the significant factor in terms of the image of God – if all human beings, whatever their condition, are in the divine image, being set in a relationship with God and having, in a sense, a history with God – then, as David Atkinson writes,

> 'every living human being confronts me with a moral claim.' [13]

Every living human being is my neighbour with a claim on me to neighbour love.

This has implications, for example, in the realms of embryology and abortion. The Warnock Report states:

> 'Even in compelling medical circumstances the danger of exploitation of one human being by another appears to the majority of us to far outweigh the potential benefits, in almost every case.' [14]

But even this modest concession to utilitarian, humanistic philosophy, reflected in the words 'in *almost* every case' (emphasis added), means that in certain cases – specifically in the cases of some human embryos under 14 days old – a human being can be used as a means to the ends of other human beings. A strong case can be made biologically as well as theologically that the early human embryo (or conceptus) is a human person, a being of human nature. It is not merely a mass of cells but, as Teresa Inglesias writes,

> 'it is generated as a whole, it develops and sustains itself as a whole, and it dies as a whole', with 'unified . . . powers of self growth.' [15]

Bearing in mind the fact that the body is embraced in the image of God, 'the living human organism is the living human person.'

Because every man, woman and child has intrinsic worth as a human being, made in God's image, we should set ourselves to liberate people from everything dehumanizing

---

Of course, the early embryo cannot be anything like a full manifestation of the divine image. But, after all, neither can the foetus, the newborn, nor sinful adults either. Early embryos do not differ *qualitatively* from the rest of us. God has a history and a relationship with them too (see Psalm 139:13-16).

It may be added that because every man, woman and child has intrinsic worth as a human being, made in God's image, we should set ourselves to liberate people from everything dehumanizing (such as bondage to drugs). To discover, in every realm, what accords with and gives expression to God's image is, by definition, to make human life more truly human. If, as James 3:9 tells us, we are not to 'curse men who have been made in God's likeness', we are surely by implication to seek their blessing, precisely because of their dignity as made in God's image.

And in the light of the range of factors we have considered in connection with God's image in man, we might well agree with the thrust of John Stott's words:

> 'A human being might be defined from a biblical perspective as 'a body-soul-in-community'. For that is how God has made us. So if we truly love our neighbours, and because of their worth desire to serve them, we shall be concerned for their total welfare, the well-being of their soul, body and community. And our concern will lead to practical programmes of evangelism, relief and development'. [16]

Notes and References

1 Quoted by Iglesias,T., 'What Kind of Being is the Human Embryo?', in *Ethics and Medicine,* Rutherford House Medical Ethics Project, Edinburgh, 2:1 (1986), p.7.

2 Quoted by Stott,J., *Issues Facing Christians Today,* Marshalls, London, 1984, p.18

3 Ibid., p.18

4 Clines, D.J.A., *A Biblication Doctrine of Man,* revised texts of papers read to the Social Worker's Chrisian Fellowship, April 1972

5 Motyer,A., *The Image of God: Law and Liberty in Biblical Ethics,* London Bible College Annual Laing Lecture, 1976, p.6

6 Westerman, quoted by Atkinson,D., 'Some Theological Perspectives on the Human Embryo (part 1)', in *Ethics and Medicine,* 2:1 (1986) p.9

7 Ibid., p.9

8 Kidner,D., *Genesis,* Tyndale OT Commentaries, IVP, London, 1967, p.51

9 In I Corinthians 11:7, Paul writes 'A man ought not to cover his head since he is the image (eikon) and glory of God; but the woman is the glory of man'. The context would indicate that Paul's concern here is with authority and rule, and he speaks of man as the image of God in this precise connection. He has Genesis 1 in mind where mankind is set apart from all the other creatures. The other creatures rule a given realm by God's appointment. Mankind images God by ruling over all of the realms and all of the kinds. In I Corinthians 11, Paul is clearly concerned with authority relations: functional *relations* in which God is the head, Christ is head and men are head (verse 3). The point he is making in verse 7 is that the man in his authority relation to creation and to his wife, is the image of the dominion of God over creation (as well of course as reflecting the headship of Christ over the church). So the idea of the image of God here is again closely bound up with rulership.

Is Paul saying that women do not share in this rulership; that the woman is *not* the image of God? No, the point is that women are not called to image God (which is closely bound up with rule and authority) *in the relation which they sustain to their husbands.* Rather they reflect the response of the church to God and Christ. Man is 'the glory of God' when he is in an appropriate relation to him and this points to his 'dignity, honour or station' (to quote James Hurley). A woman is 'the glory' (note, not the image) of her husband when she stands in proper relation to him and so manifests his station.

Paul does not contradict Genesis 1:26-28 which makes it very clear that man and woman share in this rule over creation, as the image of God. Indeed some would argue that Paul is *affirming* this in I Corinthians 11:10 where he applies the word authority (exousia) to the woman. The original word of command to 'rule' and 'subdue' came to the first couple, male and female together.

I am indebted here to James Hurley, *Man and Woman in Biblical Perspective,* IVP, London, 1981, See p.171ff.

10 Motyer,A., op.cit., p.9

11 Clines,D.J.A., op.cit.

12 see Motyer,A., op.cit., p.9

13 Atkinson,D., op.cit., p.9

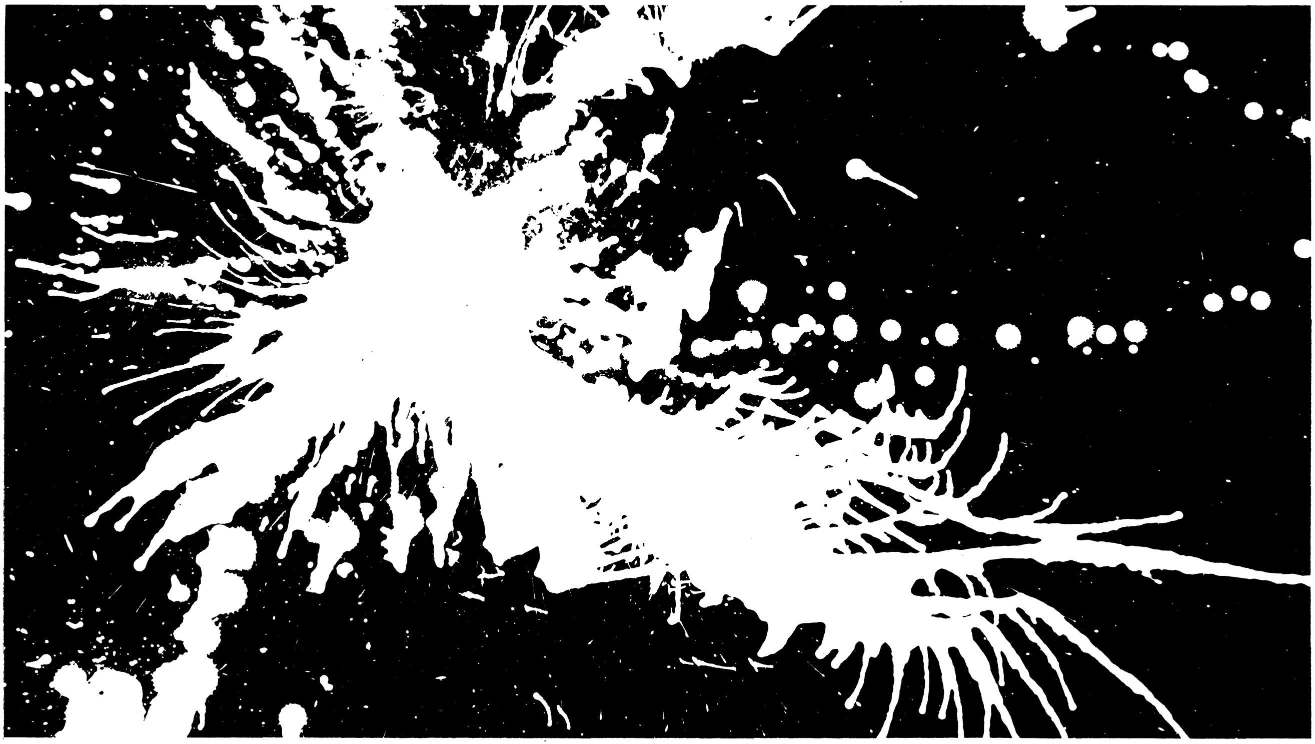
14 Warnock Report, 8.17

15 Iglesias,T., op.cit., p.4

16 Stott,J., op.cit., pp.18,19

The Other Big Bang

Andrew Loose



At the end of the 1987 Big Bang for many referred to the Stock Exchange upheaval. But in early 1987 there was an unprecedented opportunity to watch cataclysmic processes at work in another 'big bang'.

This 'big bang' was a 'supernova' – an exploding star! Hailed by astronomers as the biggest bang since 1604, it was discovered on the night of 23-24 February, in the Large Magellanic Cloud, a region of the sky visible only to those in more southerly latitudes. In spite of its spectacular nature in astronomical terms, at magnitude 4 it is not an outstanding sight.

The chief significance of a supernova lies in its vital connection with cosmological theories. If a universe is postulated as beginning with nothing more than hydrogen and helium (the 'lowest' chemical elements) then it is necessary to find a possible mechanism for the production of all other chemical elements. Nuclear reactions are believed to be the source of stellar energy and a by-product is the formation deep inside a star of heavy elements by the combination of the nuclei in a process known as atomic fusion. At a certain critical moment a supernova eruption expels up to 100% of a star into interstellar space. The standard scenario is that new stars are then formed from the enriched environment so that 'younger' stars have a more complex chemical composition than 'older' stars.

There is no one theory to explain all supernovae – indeed, there are two broad classes with, it is believed, different mechanisms being responsible for the sudden outburst of energy many orders of magnitude above the norm for the star. There are many problems associated with the theoretical treatment of a supernova to date. Amongst these are:

1) Being a catastrophic event with no warning and usually occurring in galaxies distant from our own, it has not before been possible to have 'before' and 'after' pictures of the erupting star. Thus it is conjecture as to the type of star which gives rise to such events.

2) Not knowing the types of star giving rise to supernovae leaves one uncertain of the physical constraints necessary for a theoretical treatment.

3) The theory of a star and its normal evolution is difficult enough to simulate with a mathematical model. [Physical change, in mass at least, must continuously take place, because 'fuel' is 'burnt' in keeping the star going.] To carry a set of equations in several variables through what is sometimes the complete collapse and ultimate destruction of a star is very difficult especially since each variable is a function of both position and time. The time scale for the collapse is of the order of 1 second and of the initial brightening 1 hour. Changes are indeed rapid!

Estimates of the frequency of supernovae in a large galaxy vary from 1 in 30 years to 1 in 500 years. The last seen in this galaxy was in 1604 (hence the reference above) and the continual hope of astronomers had been that when the next was discovered it would be a star whose previous 'personal details' are on file to assist in the understanding of supernovae which are key events in the theory of stellar evolution and also in the whole chemical make-up of the universe. The supernova of 1987 has been matched up with a previously known star (Sanduleak -69 202). Much data have already been accumulated, and much more will be over the coming years. It is as yet too soon to properly comment on the relationship between theory and observations, although astronomers initial suggestions are that observations conform broadly to their model.

Whatever the mechanism, whatever the type of star is prone to catastrophe, surely a supernova is one manifestation of the 'groaning' throughout the whole creation of which the apostle Paul speaks in Romans 8:22.

News of Creation

First of all a reminder concerning the Geological Excursion to the Yorkshire Coast, organized by the BCS Earth Sciences Group, and led by Joachim Scheven and David Tyler, 30th May to 3rd June this year, which BCS members are invited to attend. Further details from David Tyler on 061 973 4244.

Professor A.E.Wilder-Smith, the tireless protagonist for creation, has been busy speaking at various venues around the world. He has recently lectured in the universities of Copenhagen and Aalborg, and spoken on TV and radio in German-speaking countries; he is also due to visit the USA, New Zealand and Australia this year. His new book 'The Scientific Alternative to Neo-Darwinian Evolutionary Theory; Information Sources and Structures' is due to be published in California, which we hope to review when available.

Our Chairman Dr. David Watts has just returned from business in Canada; there he met a geology student who said that Sylvia Baker's 'Bone of Contention' had been used to bring him to a belief in creation, which led subsequently to his coming to faith in Christ. We praise God that he opened his eyes to see his handiwork, and we should be encouraged to present creation to all, praying that the Creator will reveal his truth to many others.

There were a number of BCS activities during 1987 which are detailed in the following reports.

BCS at the Bible Weeks

Throughout the summer of 1987 volunteers from the membership of the BCS, usually led by Sheena Eisaks, were to be found representing the Society at a number of Christian gatherings around the country. This was a substantial undertaking, and the first time that it has been attempted.

The first venue was a youth camp near Thirsk, in North Yorkshire, with 500 teenagers present; this was followed by representation at the family week of the Keswick Convention, with up to 2000 attending. Immediately after this came Royal Week, Cornwall, with double that number. The following week the stand was housed in a hangar at Festival, Warwick, with some 5000 people attending, and concurrently another display was manned at the previous site in North Yorkshire, this time for a family camp. This display travelled to Restoration '87 in Builth Wells for two days, then finally to Keswick-in-Wales at Llandrindod Wells for leaflet distribution for a day.

As most of those attending would have been evangelicals, the object of the BCS presence was to make known the work of the Society, and perhaps more importantly to alert them to the importance of the issues surrounding creation in our day. Sadly it appeared that, whilst there was considerable interest in the stand, and a considerable amount of literature was sold or distributed, for many visitors creation is a peripheral issue; apart from the fact that few had heard of the society. Quite a number had no idea what creation involved, and the two most common questions were concerning the age of the earth (to be addressed in Origins 2:6, God willing) and whether there was any material for the children to read. Whilst it is recognised that there is a real need for children's literature, why is it that the adults do not think it is something they need to read about?

It became clear that a better permanent exhibit was needed, both in terms of the stand and the materials displayed, in addition to the ever-present need for suitable literature at all levels. It is hoped that this will be available for the 1988 season, when it is planned to be present at a number of these or similar events.

BCS Regional Conference, Chingford

Charles Whitworth

Despite the continuous steady rain all day some 40 members and friends gathered with some enthusiasm at Sewardstone Evangelical Church, Chingford, on Saturday 10th October 1987, for a BCS South-East Regional Day Conference. There were two speakers, and the overall title was 'Creation and the Early Earth'.

Nancy Darrall (who holds a research degree in Botany) spoke on the topic 'Dinosaurs, Extinction, and the Farly Earth'. She introduced her talk by describing and illustrating these 12 orders of reptiles now extinct but once widely distributed on the early earth. The variety of dinosaur creatures was immense, from mighty Brachiosaurus weighing 100 tons, to little Compsognatus, about the size of a chicken. The range of dinosaurs we know about was likened to the animals we might find in a 20th Century African game park.

What brought about their extinction? Nancy showed that many of the evolutionary explanations of their disappearance can be fitted in well to a creationist model of the post-Flood environment. The general deterioration in conditions would have worked against their survival in many ways. Greater season and temperature variation; poorer soil and less rich plant life; generally poorer adaptation of populations as compared to the pre-Flood world. It was shown that the Genesis account provides a sound model for explaining the disappearance of these fascinating creatures which are so richly preserved in the fossil record.

'Creation and the Fossil Record' was the title of David Tyler's talk. David has undertaken extensive field geology trips in recent years and is widely read on the fossil record. He concentrated on two areas, the implications of the so-called 'living fossils', and the absence of genuine transitional forms in the record. Evolutionists have to admit, he said, that fossil finds such as horseshoe crabs and fruit bats show no significant differences with their living descendants today. Filling the gaps in the geological column in the evolutionary line of descent is as Stephen Gould (a Harvard biologist and an evolutionist) has said 'largely a matter of inference'. David's conclusion – which was where he began – was that the Fossil Record is a friend of the biblical account of origins; exactly the opposite to what is commonly asserted in most textbooks.

Tapes of both talks are available from the BCS (from the Rugby address), purchase price £2.00 inc. p&p. We were grateful to Sheena Eisaks for the bookstall, and to the officers and members of the church for their hospitality.

Creation-Evolution Seminar at Bolton

A one-day Creation-Evolution seminar was convened at Cornerstone Baptist Church, Bolton, on 17th October 1987, and BCS were asked to provide the speakers. In spite of the suburban location, some 200 people were present from the host and surrounding churches, including a large proportion of young people.

First in the afternoon David Watts spoke on 'What is Creation', and dwelt on the oft-neglected distinction between absolute and mediate creation; in other words the fact that whilst God created the heaven and earth out of nothing initially, he formed man, for example, from the dust of the earth that he had created.

Mike Matthews then spoke on 'Evolution – Science or Religion?'; after defining each term, he concluded that evolution*ism* could be a religion. A revised version of this talk was published in Origins 1:3. During this session, David Tyler took the young people aside for a journey around the universe (metaphorically speaking). He showed how, by comparison with other planets, the earth was clearly a body prepared in every detail to sustain life.

After tea David Tyler again spoke, this time to the whole assembly, on 'How to Interpret the Fossil Record'. With a series of interesting slides, and particularly with some very telling diagrams, he showed that the 'traditional' interpretations of the evolutionists seemed to lie very uncomfortably upon the facts.

On Sunday, the following day, the same three speakers returned to preach at Cornerstone and another gathering in Bolton, on subjects related to the topic of creation. The main talks and sermons were recorded, and it is hoped that they will soon be available if there are any requests for copies. The general format adopted for the weekend seemed very successful, with BCS acting in the capacity of a service to the church, and the local church able to target its publicity very carefully. BCS is happy to consider providing speakers for similar gatherings elsewhere, and we are grateful to Cornerstone for their invitation and their warm hospitality.

BCS Publications

Some of our readers may not be aware of the other range of BCS Publications which are available. Since *Biblical Creation* first appeared in October 1978, a number of pamphlets, monographs, etc., have been published by the society, apart from the journal (now renamed Origins and in a new format, BC being A5). In addition the 4-page *Rainbow,* now incorporated into the journal, was circulated in considerable numbers.

Tapes and audio-visual materials are also available from BCS, some of them again being produced by the society. These are also listed below. Further details, prices and order forms can be obtained through the Rugby address of the BCS.

Biblical Creation (Journal of the BCS)

The journal began in October 1978, and continued publication through 24 issues up to 1986, in A5 single-colour format. A number of special issues were produced at intervals, including 'Life on Earth', 'Understanding Fossils and Earth History', and 'Creation and the Christian response to Warnock'. Nos. 1 to 4 are no longer in print (though photocopies can be provided on request at a price), but copies of the rest are still available.

Origins (successor to BC)

The new journal, in the present format, began in 1987, when three issues were published. The first issue had articles on Computers and Creation, and the Cosmos, and the second looked at Quantum Theory. The previous edition to this asked 'Where Was Eden?, and 'Is Evolution Science or Religion?'

In The Beginning

A symposium on the Bible and Creation, in BC format, being papers given at a BCS London Conference by Don Carson, Edgar Andrews, Ranald Macaulay, and Gordon McConville.

Technical Monographs

Two have so far been produced in this series; Archaeopteryx Lithographica Reconsidered, by Gerald Duffett, and The Species Problem, By Edward Brearley.

Rainbow

Rainbow was a 4-page A4 two-colour well-illustrated publication, designed to appeal to a wide spectrum at a popular level, and at a very realistic price in quantity. 12 issues were published, with a number of interesting articles, including Surtsey, the world's youngest island, Comets, Cockroaches, and Natural Load-Bearing Structures. 'Origins' is designed to include similar material to Rainbow, as well as more technical items.

Booklists

A number of specialist booklists are available, on Biology, The Early Chapters of Genesis, and The Early History of Israel and Its Neighbours.

Thinking Again Leaflets

These are a series of inexpensive leaflets to provoke thought and discussion on a number of topics; Adam, Consequences of Evolution, Creation & Providence, Evolution, Fossils, The Origin of Life, The Big Bang, and Dinosaurs.

Teacher's Leaflets

Two leaflets, by Edgar Andrews and Keith Stokes, dealing with issues that crop up in education.

Creation Starter Pack

A folder with an attractive full-colour cover containing a number of issues of BC and Rainbow, together with some Thinking Again leaflets, 'Bone of Contention' (published by EP), and information about the BCS.

Audio-Visuals

A number of slide sequences on various subjects, together with taped commentaries, (produced elsewhere), are available through BCS.

BCS Tapes

Tapes of a number of talks by various speakers, including Sylvia Baker, Gerry Griffiths, Edgar Andrews and others, at BCS Conferences, Study Conferences and Symposia over the years are available for purchase.

Book Reviews

Two Men called Adam

Author : Arthur C. Custance
Publisher : Doorway Publications, Ontario.
Reviewed by Paul F. Taylor

The purpose of this book is stated on the front cover – 'A fresh look at the creation/evolution controversy from a different point of view – the THEOLOGICAL'. It is not enough for creationists to argue from science alone; and that has always been the view of this society; it is why we are the BIBLICAL Creation Society. Arthur Custance has written a well argued and accessible work on the subject. While this reviewer cannot accept every argument in this book, we are pleased that there is a recognition that there is a Biblical and theological aspect to creationism, instead of just a scientific one.

Stating the problem, Custance argues that body and spirit are not separate. The Bible does not view the body as a trap for the spirit, but rather the spirit finds expression through the body. He argues that the embodiment of the human spirit is not a trap, as Greeks thought, but a state planned by God. This is important, because it helps us understand about Adam, and the Second Adam, namely Jesus Christ. The evolutionist sees man as essentially meaningless, with no purpose to his life, and no destiny to look forward to. Christians have unconsciously compounded this problem by taking an opposite extreme. "We have tried to make him (man) essentially 'angelic', a spiritual being who, however, just happens to have a body, a body which we shall be only too happy to slough off." (page 19) Custance shows that we have a body so that we are a single species, from a single father, requiring a single Saviour. We have a body so that we can mature, and so that we have consciousness. God had to take bodily form in order that He might be able to die. So a discussion of the nature of the human body helps us to understand our salvation.

Chapter 3 deals with the subject of the human body as a wonderful machine. The author ably describes the processes undergone by a virtuoso pianist. Not only does he demonstrate dexterity of finger movement and touch, but his eyes scan the score, interpreting the notes, and his ears monitor the sound and touch, with the brain interpreting the whole process. This would be "impossible for a mere angelic being." (p33). Nor can an animal body do such things. Man is a combination of inventive spirit and unique body. Spirit and body match exactly. "Man stands apart from the rest of nature" (p38). Jesus had to have a perfect human body. Evolution could not have provided him with this.

The author ably argues in chapter 4 that the human body is capable of immortality. He defines such biological immortality as not decaying to die of old age. Thus the immortal creature CAN be killed, but need not die in the right conditions. This is how Adam's body must have been, otherwise, says Custance, the threat of death for disobedience would have meant nothing. Jesus's body, therefore, could potentially have lived forever. His death was not merely premature death, but a voluntary death. Such vicarious death is life given, not life shortened, and only Jesus could have done it.

The single species idea is explored further in chapter 5. Custance shows how necessary it was for Eve to have been created from Adam rather than separately. That way, Adam was the Head of our family – the first of the species. If Eve were a separate creation we would need a Second Adam and a Second Eve as well. But Adam was our one representative so Jesus can be our one representative. Later in the book, Custance shows that this representative nature of Christ is not possible with evolutionism. The area where I take issue with Custance's arguments is with his definition of death. He argues that animal death is very different from human death, that animals do not grow old and senile. This is patently not so. He therefore argues that animal death is not a result of the fall, and not a consequence of man's sin. But surely our sin has polluted the entire creation. Custance's argument would imply that animal death were possible before the fall – something which this reviewer can not accept. Romans 8:22 shows us that the whole creation has been affected by the fall, and longs for redemption.

This quibble aside, Custance has rendered us a service in tackling this subject; creationism is not to be argued on the scientific front alone. If the first Adam had no perfect body, then there was no perfect body for Jesus, and there will be none for us when we are glorified. Theologically we cannot hold to a perfect resurrected body, or a perfect Jesus Christ, perfectly conceived by a virgin, unless there was a perfect representative of our race, who sinned and imputed his imperfection to us. It all ties together!

This book and others by Arthur Custance can be obtained in this country from Mr. Derek Massey, 23, Baker Crescent, Baddeley Green, Stoke-on-Trent, ST2 6LH. – Ed.

Crossroads Creation Series
A series of audio-cassettes
Reviewed by David Tyler

This series of thirteen television programmes have been prepared to raise questions in the viewer's mind concerning subjects related to our origins which most people have learned at school and through the popular press. Having listened to the audio-cassettes of the programmes, the writer is happy to recommend them for use in group studies on the subject of origins. The tapes cover a wide range of subjects and will provide numerous points for discussion.

The contents are of uneven quality. Those considered most useful are as follows: The Beginning of Life, The Origin of Species, Those Missing Links, The Population of Man, Nature or Nurture?, and Darwin's Legacy. The latter tape is particularly useful for stimulating thought on philosophical and religious issues, and to show the way our culture has been moulded and changed over the past century by Darwinistic ideas.

Members of BCS wishing to use the tapes should contact the BCS Administrators, who have a set available for loan.

The Great Evolution Mystery
Author: Gordon Rattray Taylor.
Publisher: Abacus, London, 1984. £3.95
Reviewed by David J. Tyler.

The present ferment of ideas in biology about origins has generated an extensive literature, much of which is not easily digested by those not directly involved. The reality is that traditional neoDarwinism is disintegrating, and biologists are becoming more and more willing to admit the inadequacies of the past orthodox positions. The first crack in the edifice has come about because of the insistence of many palaeontologists that there is a punctuated, rather than a gradual, pattern of change in the fossil record. Once biologists were forced to think through the implications of stasis and discontinuity, they rediscovered numerous other evidences which are not easily accommodated within Darwinism.

Gordon Rattray Taylor's gifts as both a biologist and a communicator were well used in his work as Chief Science Advisor to BBC Television, and in the writing of numerous books. **The Great Evolution Mystery** was completed just before he died in December 1981. The author was an evolutionist who had become profoundly dissatisfied with Darwinism.

> *"The fact of evolution is not in question. What is in question is how it occurred and whether natural selection explains more than a small part of it. As we shall see, a great many eminent biologists have raised this question, but such has been the confidence and aggressiveness of the Old Guard that their views have been swept under the carpet and ignored. There has been a tightly knit school of neoDarwinians, headed by such important figures as Ernst Mayr of Harvard, Theodosius Dobzhansky, most recently of Rockefeller University, George Gaylord Simpson, Agassiz Professor at the Museum of Comparative Zoology at Harvard, in America; and in England the late Professors Julian Huxley and J.B.S. Haldane, who have trenchantly defended the orthodoxy, often in the face of the facts. So, today, nearly fifty years later, the time has come, it seemed to me, to face the facts and attempt what no one has yet done; namely, to lay out the evidence clearly and systematically." (p.11-12)*

Taylor succeeds in his aim admirably. The book is always interesting and often inspiring reading. Every section is liberally illustrated with biological examples and anecdotes, all woven together to produce an impressive tapestry: a powerful and coherent case against Darwinism. All the key areas of debate are reviewed and helpfully discussed. Instead of biologists having satisfactory answers to problems, Taylor repeatedly concludes that everything to do with origins is far more complex and intricate than previously thought, and that biologists are still out of their depth in seeking to understand these mysteries.

Having read fairly widely on the subject of evolution and the fossil record, the reviewer was delighted to find this subject covered in a fresh and stimulating way. Whilst discussing the key transitions, one or more key biological innovations are addressed. Thus, the fish to amphibian transition has an account of the amazing characteristics of bone; the amphibian to reptile transition considers "the stunning advance" of the reptilian egg; and the evolution of birds elaborates on the "extraordinary" construction of feathers.

In his assessment of neoDarwinism, Taylor has over fifteen reasons why the Theory is unsatisfactory.

> *"All in all, evolution remains almost as much of a puzzle as it was before Darwin advanced his thesis. Natural selection explains a small part of what occurs: the bulk remains unexplained." (p. 232-3)*

It is impossible to do justice to these arguments by attempting a summary. Reading the book is heartily recommended. In a few places, the published work of the 1980's warrants the revision of some statements, but these changes concern details and do not affect the validity of the general points.

Several research areas are identified as potentially fruitful. Taylor is fascinated by the subject of animal behaviour. He draws attention frequently to behavioural changes induced by changes in the environment:

> *"Whether species survive or not... depends far more on their behaviour than on the availability of niches. Their skill and persistence in finding food, their ingenuity in avoiding predators, their success in finding a mate and rearing a family – these are the determinants of survival." (p.217)*

This being so, the Darwinian conception of creatures surviving the battle for existence by their superior adaptation to the niche they fill is seen to be nonsense. Nevertheless, Darwinists consistently have considered adaptation entirely in terms of genome expression under the influence of natural selection.

However, where do behavioural characteristics come from? After providing numerous biological examples, Taylor poses a vital question:

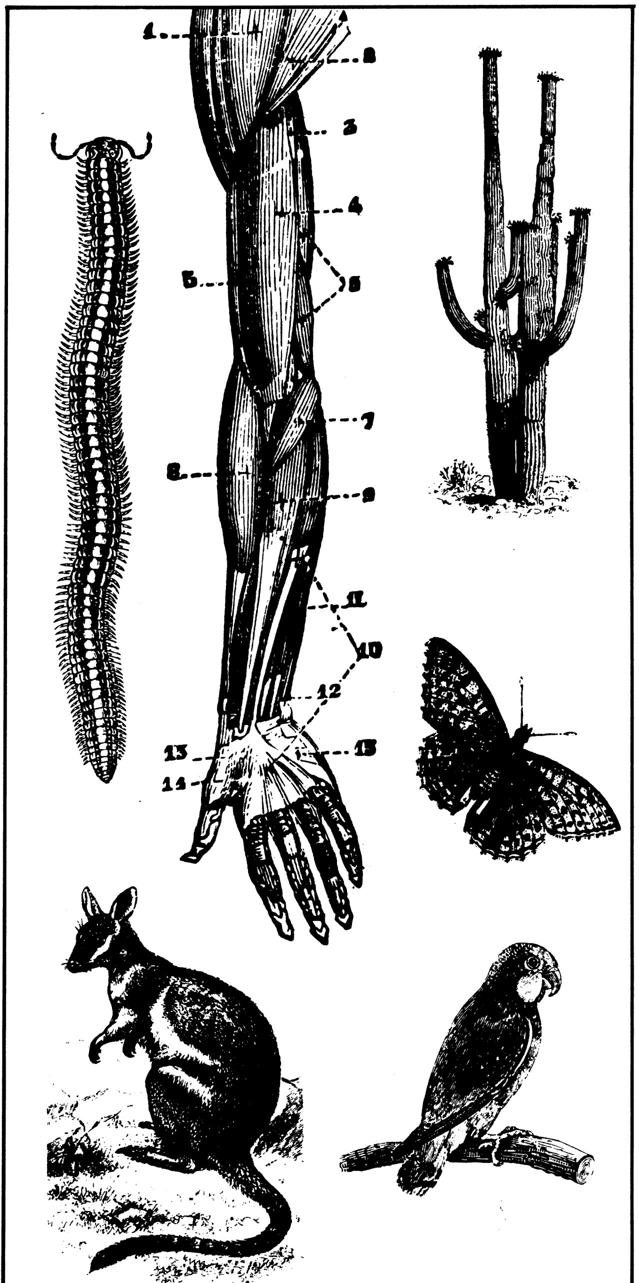
> *"Behaviour is to some degree instinctive, to some extent learned. That part which is instinctive must be inherited. Does it then obey the laws of evolution and how does it originate?" (p.220)*

There are real mysteries here. Taylor advocates a Lamarckian approach to the modification and inheritance of behaviour, for which there is substantial evidence. However, the mechanisms behind the observations are entirely unknown. In the judgment of the reviewer, this area is one where creationist-oriented research has great potential: a link between behavioural modifications and speciation is fully consistent with the concepts of limited genome variability and the 'created kinds'.

Taylor's closing paragraph includes the following:

> *"Evolutionists have been blinkered by a too narrowly materialist and reductionist approach to their problems. But the trend of the times is away from Victorian certainties and Edwardian rigidities. In the world as a whole, there is a growing recognition that life is more complex, even more mysterious, than we have supposed." (p.245)*

May the day soon come when such thinking becomes widespread among biologists! Yet the explanation of this complexity and mystery is truly known only by the believer: **"How many are your works, O Lord! In wisdom you made them all; the earth is full of your creatures."** (Psalm 104:24).



Correspondence

The Young Scientist Book of Evolution

Authors : B. Cork & L. Bresler

Publisher : Osborne Publishing Ltd. 1985. £2.25

Reviewed by Sylvia Baker

Part of a well-presented and colourful children's series, this book is refreshingly unusual. The sub-title, "Discoveries and theories of the origins of life" gives a hint of the tone in which it is written. Whilst still being totally committed to an evolutionary view of origins, the writers honestly admit that they are dealing with theories and that other views exist. We are told that "many people" and "most scientists" believe in evolution (p.2) but that "some people do not believe in evolution" and that "Creationism and other religious beliefs today provide the main alternative to the scientific theory of evolution" (p.5).

Such honesty is indeed unusual in a popular book on evolution and it is most welcome.

Such honesty is indeed unusual in a popular book on evolution and it is most welcome. The same frankness and lack of dogmatism shows up in many different sections of the book, especially in the section on "Human Evolution" where it is almost admitted that the fossil evidence is very poor. "Until more fossil evidence is found" they say, "the complete version (of human evolution) will remain unknown".

It was perhaps only to be expected that the writers do not have a proper grasp of the "creationism" that they at least admit exists. Of the three separate definitions of "creationist beliefs" given on p.7 two would be unrecognisable to most creationists and in the Glossary a definition of "creationism" is given that is most unfortunate. By declaring creationists to believe that, "God separately created each species, which never change", the authors have successfully made us look like "flat-earthers" whose quaint, unscientific religious views can easily be laughed off. Creationists have always believed in a degree of change and it is time our opponents admitted the fact.

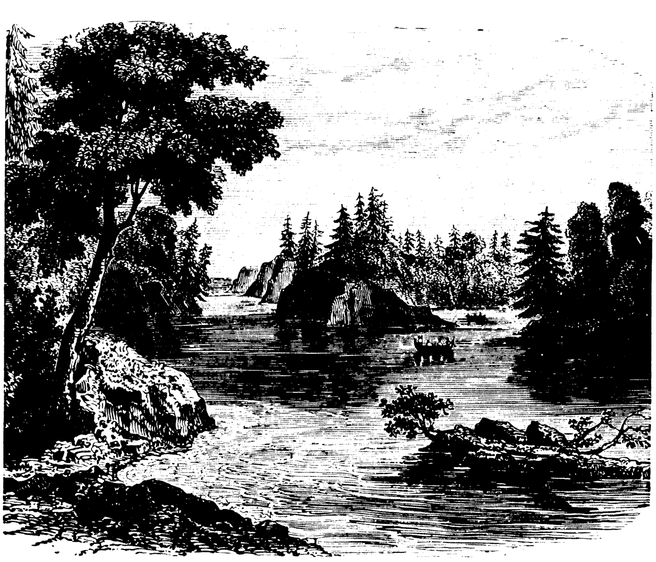
Another basic mistake, one that might not even be apparent to many creationists, concerns the status given in the book both to evolution and to creation. "Evolution" is seen to be science, whereas "creation" is a religious belief which cannot be tested scientifically. The writers would do well to see that evolutionary belief has a similar religious status to that of creation – they are indeed alternative religious views of the origin of all things.

These problems apart, it is very encouraging to see a book which gives to creationism both recognition and a degree of respect.

Extract from letter from Prof. Dr. Samuel Külling, Freie Evangelisch-Theologische Akademie, Basel, Switzerland.

We want to comment on an article on the Second European Creationist Congress which was published in Origins 1:2. You stated that the creationist movement in the Federal Republic of Germany owes its existence to Dr. Beck who founded "Wort and Wissen" in 1979. We are thankful for the efforts of Dr. Beck, but we want to remark that the German creationist movement owes its existence in the first place to Dr. A.E. Wilder-Smith. He not only started to publish books on creationism in German 1948-1950, but inaugurated through his many seminars, publications, articles and public appearances the fact that creationism became more and more a matter of discussion and acceptance also in scientific circles. It is scientifically correct to add that Dr. Beck owes much of his valuable work to the inspiration of the thoughts of Dr. Wilder-Smith.

(We are grateful for this relocation of emphasis, and are pleased to be able to acknowledge the pioneering work in several countries of Dr. Wilder-Smith – Ed.)



ERRATUM

In Origins 1:2, in the article 'Questions of Quanta', p.6, third paragraph, second column, the last sentence should read 'Classical mechanics is a deterministic theory of positions; quantum mechanics is a deterministic theory of wavefunctions.'

ORIGINS
• Journal of the Biblical Creation Society •

Origins is published three times a year by the
Biblical Creation Society

President	Prof. Edgar Andrews *University of London*
Vice-Presidents	Ranald Macaulay *L'Abri*
	The Revd Geoffrey Thomas *Aberystwyth*
	Prof. Verna Wright *University of Leeds*
	The Revd Dr N M de S Cameron *Edinburgh*

More information about the Society may be obtained from the Secretary
Biblical Creation Society PO Box 22 Rugby Warwicks CV22 7SY

Subscription enquiries should be addressed to the
Administrative Officer

PO Box 22
Rugby Warwicks CV22 7SY

Subscription Rates

Membership open to all in agreement with Aim & Doctrinal Basis of the Society. Husband and Wife for a single fee.

	Membership		Journal Only	
	Standard	Reduced	Standard	Reduced
Inland	£7.00	£3.50	£3.60	£2.50
Europe	£8.00	£4.50	£4.10	£3.00
Outside Europe (surface)	£8.00	£4.50	£4.10	£3.00
Outside Europe (airmail)	£9.50	£6.00	£6.60	£5.50

Reduced rates apply to undergraduate students, missionaries, registered unemployed.

The dollar rate for those in North America (Journal Only) is
US$14 airmail
US$11 surface

ISSN 0953-2773

Typesetting by Computaset 19 Rothwell Gardens Woodley Berks. Tel 0734-692628

Printed by Inkon Printers Oldham Street Hyde Tel 061-368 3444